Science Processing System Status

AIRS Science Team Meeting

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Agenda

Science Processing System Status

- Science Processing Software (PGEs)
- TLSCF Data System
- Direct Broadcast

Schedule

Launch Readiness Checkout

Science Processing Software (SPS) Status

Status:

- V2.1.6 SPS software delivered to GSFC DAAC (Exclusive of recent L1B and L2 upgrades)

Improvements in latest release:

- L1A packet processing (2 second timing shift), AMSU-A 2-byte shift
- L1A geolocation (orbit path, granule center)
- Metadata corrections

Assessment:

- V2.1.6 is operational
- May deliver small patch enabling L1B to handle incomplete packet data for granules

Science Processing Software (SPS) Plans

Future Upgrades:

- Support TLSCF operations as needed
- Updates to the GSFC DAAC as scheduled

Possible Sources for Code Revisions:

- Thermal Vac. Test
- New AIRS L1B Algorithm and metadata (L1B IR)
- Enhanced Match-Up data format (GCM data)
- New PGEs/Products for use in TLSCF
  - L1C Summary Products
  - L3 Products
- L2 algorithm updates
- Science Team (ad hoc issues)

Other Activities: Documentation and Testing

TLSCF Data System (TDS) Status

Status:

- V2.2.0 TDS software installed and tested at TLSCF (JPL)

Features:

- Basic TDS Operational
  - File Ingest
  - End-to-End Processing
  - File Archive and Catalog (DOM)
- Capability to incorporate SPS software enhancements as they made available
  - SPS Release 2.1.6 (same PGEs sent to GSFC DAAC)
  - SPS Releases 2.2.0.x (developmental releases)
  - TLSCF Match-Up PGEs

Assessment:

- V2.2.0 is operational
- Additional work necessary to improve Operations workflow

TLSCF Data System (TDS) Plans

Near-term Code Upgrades: (December 2001)

- Improve TDS Operability
  - Job Specification
  - Job Control
  - Job Monitoring

Future Code Upgrades: (Spring 2002)

- Additional Operability Enhancements (Job Control)
- Extend archive to include new data types (Correlative Data and PGE Products)
- Additional PGEs for use within TLSCF (L1C)

Other Activities:

- Documentation
- Testing

Direct Broadcast Status

Status:

- Under development, automation L0 through L1B processes

Features:

- Capability to process L0 packets, L1A through L1B PGEs
- Utilizes same PGEs delivered to GSFC DAAC
- Initial testing will occur at University of Wisconsin, Brazil
- Platforms supported: SGI, Sun, Linux (Red Hat)

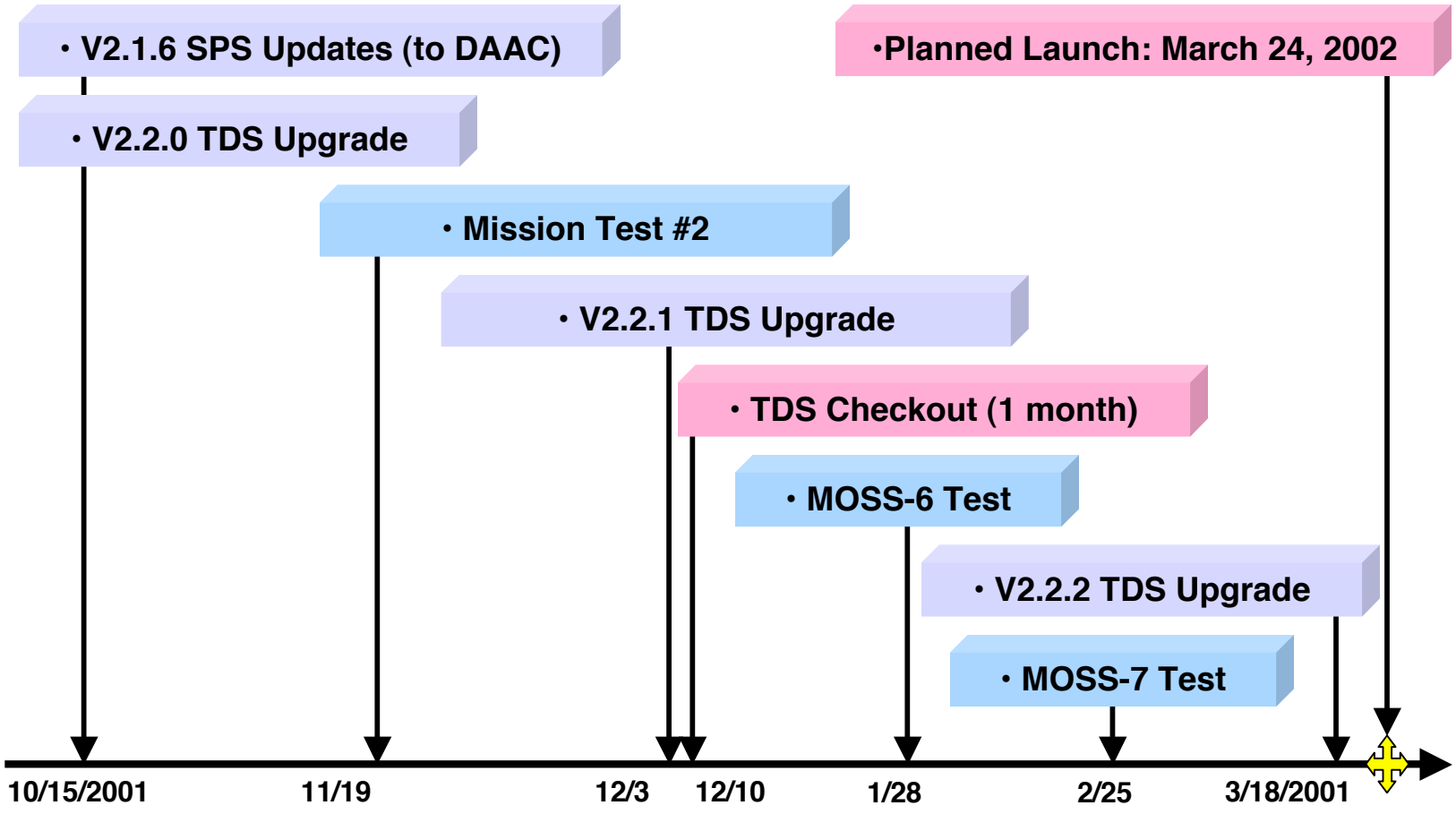
Schedule:

- Preliminary Release scheduled for late December 2001
- Final Release scheduled for late August 2002

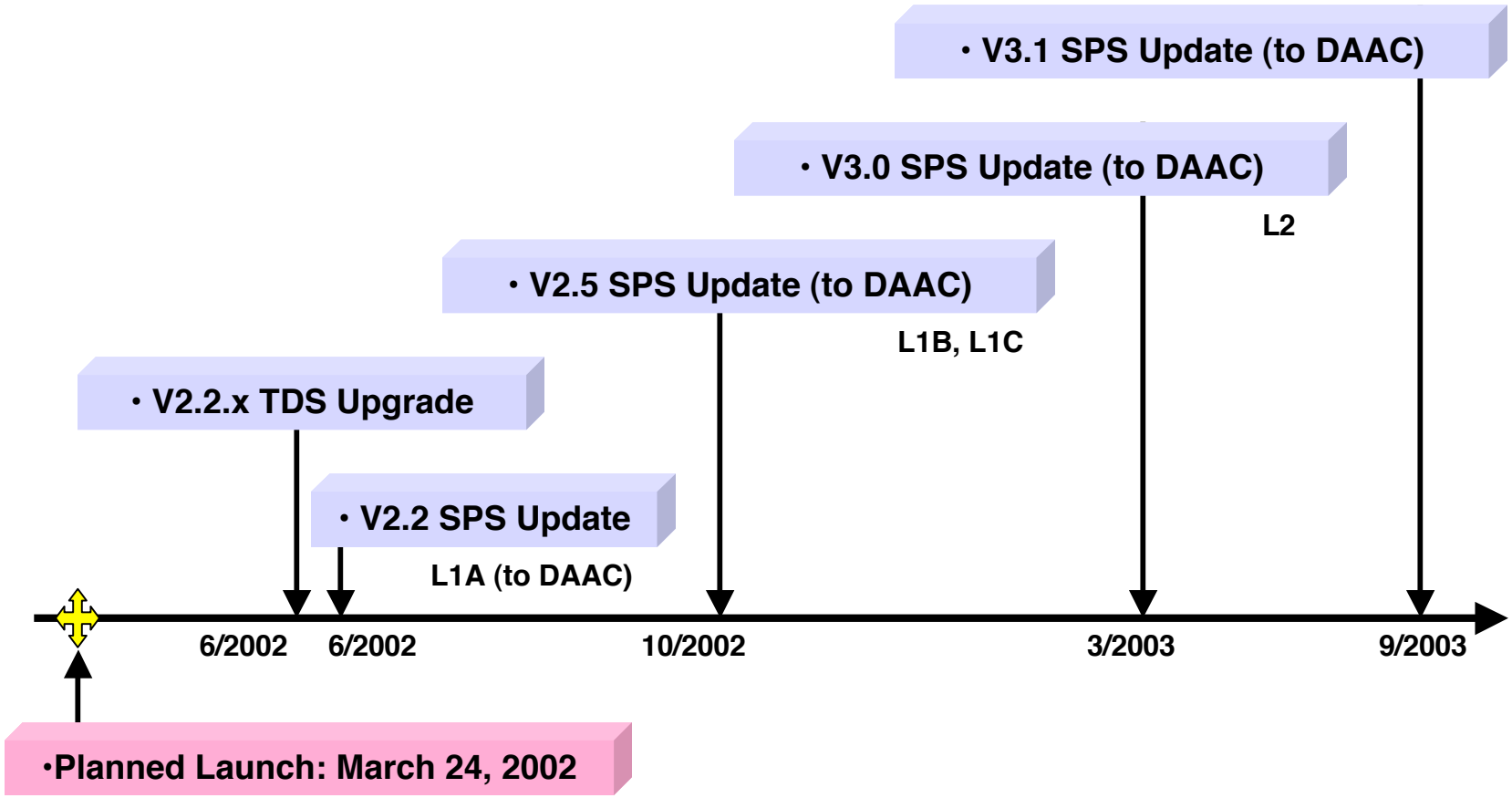
Assessment:

- On schedule
- L0 interface/ingest issues must be defined
- Testing of Direct Broadcast still to be defined

Pre Launch Schedule



Post Launch Schedule



Launch Readiness Assessment

Validate AIRS Science Processing System launch ready

- Validate software
  - SPS software is operational and performs as expected
  - TDS software is operational and performs as expected
- Validate TLSCF
  - Data ingestion
  - Data load
  - Operations

Validation Activities

- TDS Checkout Test (JPL test – 1 month duration)
- Mission Test (ESDIS test)
- Mission Operations & Science Systems (MOSS) Tests (ESDIS)
- TDS checkout of SPS PGEs using TVAC generated data
- Cross-validation of AIRS (IR) L1B to Calibration Testbed

TDS Checkout Test

Run TDS for one month

- Utilize L0 simulated data (1 wk, replicated 4x)
- Simulate daily data flow
- Simulate typical TDS data processing load
  - Daily L1A, L1B
  - Match-Up Processing of Correlative Data (e.g., RaObs, Surface Marine)
  - Rapid software upgrade followed by Reprocessing of L2 Match-Up data
  - Limited L2 data – 1 day *(Golden Day)* – with reprocessing

Goals

- Demonstrate TLSCF can handle data load
- Demonstrate TLSCF Operations can handle data load
- Support validation of Science Algorithm implementation